Remarks

As will be discussed below, considering that these amendments clearly place the application in condition for allowance and do not raise any new issues that would require new searching or consideration by the Examiner, entry of the above amendments is respectfully requested.

Status of All of the Claims

Below is the status of the claims in this application.

1. Claim(s) pending: 74-101.

A. Claim 74, 78-82, 87, 93, 94, and 96-101 have been rejected under 37 USC 103(a) as being unpatentable over Chevillon et al. (U.S. Patent 5,968,071) in view of Tsukernik (U.S. Patent 6,558,404) and Melzer et al. (U.S. Patent 6,847,837).

The Office Action states that it would have been obvious to combine the teachings of Chevillon, Tsukernik and Melzer '837 to create the device of independent claims 74 and 99-101. Applicants respectfully disagree. First, although Chevillon teaches the use of an implantable vessel filter, Chevillon fails to contemplate the use of conductive filtering elements and a dielectric positioned therebetween to solely form a capacitance and inductance tuned to the resonant frequency of a tomograph. Chevillon merely states that "the same metal [used for the legs] can be used for the head." Col. 4, lines 25-26. The only mention of a dielectric is the general statement that "a plastics material can also be used in place of the metal." Col. 4, lines 31-32. There is no discussion of the possibility that the head could be made of plastic and the legs made of metal to achieve a capacitive effect. Instead, Chevillon teaches that the reason for placing one end of the filter leg within the head portion and the other end of the filter leg on the outside of the head portion is to allow the head diameter to be made smaller and therefore less resistive to blood flow through the vessel. Col. 2, lines 1-8.

Chevillon further states that, in certain embodiments, one end of the filter leg could be connected directly to a middle portion of the leg to further reduce the required diameter of the head. Of course, this arrangement would render the filter useless as a capacitor and is further evidence that one of ordinary skill in the art would not look to Chevillon as a suitable filter for performing a capacitive or inductive function.

The Office Action states that even if Chevillon were not considered to disclose a plastic hub, "Tsukernik teaches a filter having metal struts and a hub constructed of plastic." The Office Action goes on to state that the combination of Chevillon and Tsukernik would have been obvious because "the technique of using a plastic hub was recognized as part of the ordinary capabilities of [one] skilled in the art and the use of a plastic hub would yield predictable results." Applicant's respectfully submit that while the sliding member 70 or collar 52 of Tsukernik (referred to as a "hub" in the Office Action) may be described as being plastic, it is not comparable to the head 5 of the Chevillon filter. First, the ends of the legs of the Chevillon filter are fixedly attached to the head. Col. 5, lines 27-31, 45-55. By contrast, the sliding member 70 of Tsukernik is meant to be movable along the length of the filter legs in order to facilitate expansion and retraction of the device during implantation and removal. Furthermore, the strands 32 and 42 of the Tsukernik filter are directly connected and are additionally connected via a ring 54, so that there can be no capacitance created between the strands. Using any of the "hub" elements of Tsukernik to secure the legs of the Chevillon filter would therefore result in a sliding hub on metal legs with no capacitive effect. Applicants therefore respectfully submit that the use of the sliding member 70, collar 52 or ring 54 of Tsukernik in conjunction with the filter legs of Chevillon would not yield a predictable result as they are functionally incompatible.

Applicants further submit that even if the devices of Chevillon and Tsukernik were combined to form a vessel filter having a plastic hub and metal legs, the further combination with Melzer '837 is not proper and, in any event, would not produce the features of present disclosure. When rejecting claims under 35 U.S.C. § 103, "the Examiner bears the burden of establishing a *prima facie* case of obviousness based upon the prior art." *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1783 (Fed. Cir. 1992). To establish a *prima facie* case of obviousness, the Examiner must provide objective evidence or findings supporting the conclusion of obviousness. Mere conclusory statements cannot support the legal conclusion of obviousness. *KSR Int'l Co.*, 127 S. Ct. at 1741. That is, a mere collection of unrelated elements cannot be used to assert that a particular combination would have been obvious. Rather, the Examiner must identify how a

---

[1] Citing In re Piasecki and Meyers, 223 U.S.P.Q. 785, 787-88 (Fed. Cir. 1984).

person of ordinary skill in the art would, by known methods, combine the elements in the way the claimed invention does. *Id.*

The present Office Action states only that "it would have been obvious to one skilled in the art at the time the invention was made to modify the device taught by Chevillon...in order to clearly see the filter and also measure blood flow through the filter." The Office Action fails to articulate any known methods for forming a vessel filter to act as a capacitor without the need for individually-added annular capacitors. In fact, the prior art teaches that it is necessary to add capacitors to the filter. Just because a plastic hub is positioned between the ends of the conductor 11 of Chevillon, it is quite unlikely that an appropriate capacitance would result between the ends of the conductor 11. To conclude otherwise is to include the benefit of hindsight. It is expected that a typical capacitance required to allow tuning with a tomograph would be in the range of less than 10 picofarads. To create such a capacitance, the distance between the ends of the conductor ends must be in the range 10-15 microns. In addition, the surface of the conductor element must be very flat, with a surface roughness of less than 1 nanometer. Neither Tsukernik nor Chevillon provide any teaching of tolerances that could produce a typical capacitance required to allow tuning with a tomograph. Therefore, the filter of Chevillon is not compatible with the filter of the present disclosure.

Furthermore, the filter of Melzer '837 comprises separate tunable capacitive elements which are attached to the legs of the filter. If the Melzer '837 teaching were combined with Chevillon and/or Tsukernik, the resulting device would contain a filter structure with separate inductors 25a and 25b (See Melzer '087 Fig. 8a and 8b) and annular capacitive elements attached to the filter framework. In such an arrangement, the filtering function would not be performed solely by the conductor and dielectric as is required by pending claims 74 and 99-101. Applicants therefore respectfully submit that amended claims 74 and 99-101 are in condition for allowance.

Applicants further submit that claims 75-98 depend from claim 74 and are therefore allowable at least to the extent that claim 74 is allowable. With regard to the rejection of claim 75 under § 103(a) based on the combination of Chevillon, Melzer '837, and further in view of Dubrul et al. (U.S. Patent 6,238,412), Applicants note that Dubrul does not disclose a capacitance and inductance which form a resonant circuit. In addition, Dubrul does not disclose

that the "braid" coating (insulation) of Dubrul may be adapted to regulate capacitance in order to fine tune a resonant circuit. Therefore, a person of ordinary skill in the art would not be motivated to combine the teaching of Melzer, Chevillon, and Dubrul and such combination would not produce a tomograph-tuned capacitance that solely performs the filtering function. Applicants therefore further submit that dependent claims 75-98 are in condition for allowance.

B. Conclusion

It should be understood that the above remarks are not intended to provide an exhaustive basis for patentability or concede the basis for the rejections in the Office Action, but are simply provided to overcome the rejections made in the Office Action in the most expedient fashion.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance, and the Examiner is requested to pass the case to issue. If the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the undersigned representative by telephone.

Respectfully submitted,

By /troy j. cole/

Troy J. Cole, Reg. No. 35102
Woodard, Emhardt, Moriarty, McNett & Henry LLP
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
(317) 634-3456